

WHAT IS CLAIMED IS:

1 1. For use in a digital video player, an apparatus for
2 displaying a digital still image file using a Moving Picture Expert
3 Group (MPEG) standard, the apparatus comprising:

4 a controller capable of dividing the digital still image
5 file into a plurality of sub-picture files, the controller further
6 capable of constructing an MPEG video stream from the plurality of
7 sub-picture files; and

8 an MPEG processor capable of decoding the MPEG video
9 stream to generate a plurality of decoded sub-pictures and scaling
10 down the plurality of decoded sub-pictures to a plurality of
11 reduced size decoded sub-pictures.

12 2. The apparatus as set forth in Claim 1 wherein said MPEG
13 processor is further capable of storing the plurality of reduced
14 size decoded sub-pictures in a display buffer.

1 3. The apparatus as set forth in Claim 2 wherein said MPEG
2 processor is further capable of displaying contents of the display
3 buffer only after the MPEG video stream is decoded.

1 4. The apparatus as set forth in Claim 3 wherein said MPEG
2 processor is further capable of freezing display of display buffer
3 contents until a second MPEG video stream is completely decoded.

1 5. The apparatus as set forth in Claim 1 and further
2 including decode memory that stores the decoded sub-pictures.

1 6. The apparatus as set forth in Claim 1 wherein said
2 controller is further capable of determining a size for each of the
3 plurality of sub-picture files.

1 7. The apparatus as set forth in Claim 6 wherein said
2 controller is capable of determining the size for each of the
3 plurality of sub-picture files by calculating a quantity of 16 x 16
4 pixel macro blocks that is less than a maximum quantity of macro
5 blocks that the MPEG processor can accept and decode.

1 8. The apparatus as set forth in Claim 7 wherein said
2 controller is further capable of determining that the size of each
3 of the plurality of sub-picture files does not exceed a size of the
4 display buffer.

1 9. The apparatus as set forth in Claim 7 wherein each of
2 said sub-picture files can be scaled down by overlapping a current
3 sub-picture row of macro blocks with a last row of macro blocks
4 from a subsequent sub-picture file.

1 10. A digital video player capable of displaying a digital
2 still image from a digital data storage medium, said digital video
3 player comprising:

4 a controller capable of dividing the digital still image file
5 into a plurality of sub-picture files, the controller further
6 capable of constructing an MPEG video stream from the plurality of
7 sub-picture files; and

8 an MPEG processor capable of decoding the MPEG video stream to
9 generate a plurality of decoded sub-picture files and scaling down
10 the plurality of decoded sub-picture files to a plurality of
11 reduced size decoded sub-picture files.

1 11. The digital video player as set forth in Claim 10 and
2 further including memory for storing the plurality of decoded sub-
3 picture files.

1 12. The digital video player as set forth in Claim 10 wherein
2 said MPEG processor is further capable of storing the plurality of
3 reduced size decoded sub-pictures in a display buffer.

1 13. The digital video player as set forth in Claim 12 wherein
2 said MPEG processor is further capable of displaying contents of
3 the display buffer only after the MPEG video stream is decoded.

1 14. The digital video player as set forth in Claim 13 wherein
2 said MPEG processor is further capable of freezing display of
3 display buffer contents until a second MPEG video stream is
4 completely decoded.

1 15. The digital video player as set forth in Claim 10 wherein
2 said controller is further capable of determining a size for each
3 of the plurality of sub-picture files.

1 16. The digital video player as set forth in Claim 15 wherein
2 said controller is capable of determining the size for each of the
3 plurality of sub-picture files by calculating a quantity of 16 x 16
4 pixel macro blocks that is less than a maximum quantity of macro
5 blocks that the MPEG processor can accept and decode.

1 17. The digital video player as set forth in Claim 16 wherein
2 said controller is further capable of determining that the size of
3 each of the plurality of sub-picture files does not exceed a size
4 of the display buffer.

1 18. The digital video player as set forth in Claim 16 wherein
2 each of said sub-picture files can be scaled down by overlapping a
3 current sub-picture row of macro blocks with a last row of macro
4 blocks from a subsequent sub-picture file.

1 19. For use in a digital video player having a Moving
2 Picture Expert Group (MPEG) processor, a method for displaying a
3 digital still image file from the digital video player, the method
4 comprising the steps of:

5 dividing the digital still image file into a plurality of
6 sub-picture files;

7 constructing an MPEG video stream file from the plurality
8 of sub-picture files;

9 decoding the MPEG video stream file to generate a decoded
10 MPEG video stream file;

11 scaling the decoded MPEG video stream file to a reduced
12 size video stream file; and

13 transmitting the reduced size video stream file to a
14 display.

1 20. The method as set forth in Claim 19 further comprising
2 the step of determining a size for the display prior to scaling the
3 decoded MPEG video stream file.

21. The method as set forth in Claim 20 further comprising the steps of:

overlapping a last portion of a first sub-picture file with a first row of a subsequent sub-picture file; and

5 coding the reduced size into an MPEG sequence-level header of the MPEG video stream.